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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,872	08/30/2006	Glen Rosini	ACA 6328 PIUS	2551
27624	7590	12/09/2010		
AKZO NOBEL INC. LEGAL & IP 120 WHITE PLAINS ROAD, SUITE 300 TARRYTOWN, NY 10591			EXAMINER TRUONG, TAMTHOM NGO	
			ART UNIT	PAPER NUMBER
			1624	
			NOTIFICATION DATE	DELIVERY MODE
			12/09/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

IPANLPATENT@AKZONOBEL.COM

Office Action Summary

Application No.

10/587,872

Applicant(s)

ROSINI, GLEN

Examiner

TAMTHOM N. TRUONG

Art Unit

1624

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 10-5-10

FINAL ACTION

Applicant's amendment of 9-16-10 has been fully considered. Applicant's argument has not been found persuasive since the composition of **Bolt** has all the components recited in claims 1-8. Thus, the previous rejections of 102 and 103 based on **Bolt** are maintained. New claims 9-12 have been added. Therefore, pending claims are 1-12.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-3 and 5-8 remain rejected under 35 U.S.C. 102(b) as being anticipated by **Bolt** (US 4,764,489). On column 6, Example 8 described a composition comprising an organoborane/amine complex and an effective amount of an organoaluminum compound wherein:

- i. The organoaluminum is *triethylaluminum*;
- ii. The ratio of boron to aluminum is 1:1 (which is within the ratio of 1:1 to 50:1).

- iii. The combination of which forms the first intermediate -- a "shapeable intermediate" (which is a polymerizable composition).

See the following excerpt:

EXAMPLE 8

An amount of 0.31 g (0.01 mole) of borane-ammonia complex was added with stirring to 1.14 g (0.01 mole) of triethylaluminum. As it dissolved, gas evolved slowly. The reaction was heated to increase the rate of dissolution and gas evolution and finally resulted in a very rapid evolution of gas leaving a solid foamy residue.

The polymerizable composition recited in the instant claim 8 is described on column 4, paragraphs 17-21, see the following paragraph:

The intermediates prepared in step (i) can be particulate or nonparticulate. The latter intermediates are either thermoplastic or readily plasticized by solvents or low molecular weight compounds and are thus shapeable (processable) by conventional means such as molding, spinning, casting, extrusion and the like. Fibers are a preferred form of article, preparable by spinning from the melt, plasticized melt or solution.

Thus, the claimed composition of organoborane/amine and organoaluminum, and a polymerizable composition were known in the art at the time applicant asserts the invention was made.

Response to applicant's argument: Applicants asserted that Example 8 described a ceramic composition, and not the polymerization initiator system. Although Example 8 described a ceramic composition, part of that composition is a polymerization initiator, or

“shapeable intermediate” of organoborane/amine (or borane-ammonia) and organoaluminum. The composition taught by Bolt was prepared in three steps (see column 2, lines 50-60). Example 8 taught the first step (or step (i)) which involved **reacting an organoborane-ammonia with an organoaluminum compound to form a “shapeable intermediate”** (see column 2, lines 51-56). Such an intermediate could be **“readily plasticized by solvents or low molecular weight compounds and are thus shapeable (or processible) ...”** (see column 4, lines 17-22).

Applicants amended claim 1 to recite the preamble of “the organoborane/amine complex is a polymerization initiator.” Such a preamble does not impart patentability because it does not change the fact that the composition comprises two main components: an organoborane/amine complex and an organoaluminum just as disclosed in Example 8 of US'489. The preamble of “polymerization initiator” merely states an “intended use”, and not a “distinct definition of any of the claimed invention’s limitations,” and so said preamble is **not a limitation** and has “no significance to claim construction.” See MPEP 2100, also see *Jansen v. Rexall Sundown, Inc.*, 342 F. 3d 1329, 1333-34, 68 USPQ 2d 1154, 1158 (Fed. Cir. 2003).

Applicants further stated that “Example 8 of Bolt is not a polymerization initiator, in part because there are no monomers in Example 8 for polymerization.” However, claims 1-8 **do not recite any monomer**. A polymerization initiator does not have to contain a monomer, it is a substance that would **later react with a solvent or a low molecular weight compound** (or a monomer) **to form a polymer**. Note, on column 4 (of US'489), the second paragraph described

the polymerization initiator as an intermediate that could “readily plasticised by solvents or low molecular weight compounds and are thus shapeable (processable)” As discussed above, Example 8 described the process of making the first intermediate (or polymerization initiator) which had all the components and ratio as recited in the instant claims 1-8. Thus, raising the issue of Example 8 not including a monomer is **irrelevant**. Therefore, it is maintained that Bolt’s teaching still anticipates the instant claims 1-3 and 5-8 for their limitations are taught generically on columns 2-4, and specifically in Example 8 of US’489.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 1 and 4 remain rejected under 35 U.S.C. 103(a) as being unpatentable over **Bolt** (4,764,489). The composition recited in the instant claim 1 is disclosed in Example 8 as cited above. The reference's composition differs from the composition recited in the instant claim 4 by not having a high ratio of boron to aluminum. However, on column 3, the ratio of boron to aluminum can get as high as 5:1, see the following paragraph:

The ceramic compositions made as described herein, contain about 0.2 to 20 g atoms of aluminum per g atom of boron, preferably from about 0.5 to 10 g atoms of aluminum per g atom of boron. The ceramic compositions made by the method of this invention are characterized by good strength and thermal conductivity and by a distinctive X-ray diffraction pattern.

Note, the ratio is written as aluminum to boron of 0.2:1 to 20:1 which is corresponding to the ratio of boron to aluminum of 5:1 to 0.05:1. A ratio of higher than 5:1 would only ensure the reaction would go to completion as the system is supersaturated. It is **within the level of one skilled in the art to increase the ratio of one component to drive the reaction to completion**. Furthermore, the MPEP states that the difference in concentration does not impart patentability when such a limitation is not a critical parameter.

Optimization Within Prior Art Conditions or Through Routine Experimentation

Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (Claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be prima facie

obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%.); see also Peterson, 315 F.3d at 1330, 65 USPQ2d at 1382 (“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages.”); In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969) (Claimed elastomeric polyurethanes which fell within the broad scope of the references were held to be unpatentable thereover because, among other reasons, there was no evidence of the criticality of the claimed ranges of molecular weight or molar proportions.). For more recent cases applying this principle, see Merck & Co. Inc. v. Biocraft Laboratories Inc., 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); In re Kulling, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

Thus, at the time of the invention, it would have been obvious to derive a composition with a high ratio of boron to aluminum as claimed herein in view of the teaching above.

The rejection is maintained herein for the above reasons and response to applicant’s argument stated in the above 102 rejection.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bolt** (US’489 cited above) in view of **Zharov et. al.** (US’065 – cited on the IDS). Claims 9-11

depends on claim 1, which recite a polymerization initiator wherein the organoborane is *trialkylborane*, *alkylcyloalkyl borane* or has the formula $B(R^2)_3$. Claim 12 recites specific amines which are taught in Bolt and Zharov as well. The specific organoboranes of $B(R^2)_3$ are not taught in the Bolt's patent US'489, but they can be found in the teaching of Zharov (see columns 3-4 of US'065). Because Zharov's organoborane-amine complexes had been "useful in bonding low surface energy substrates", the skilled chemist would have been motivated to substitute Zharov's complexes in Bolt's polymerization initiator composition.

Thus, at the time of the invention, it would have been obvious to make a Bolt's composition in view of the combined teachings above.

Applicant's amendment (or new claims) necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 10-5-10 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAMTHOM N. TRUONG whose telephone number is (571)272-0676. The examiner can normally be reached on Monday thru Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James O. Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Patent Examiner, Art Unit 1624

/James O. Wilson/
Supervisory Patent Examiner, Art Unit 1624

11-16-10